# Trial Run Prepares Center to Transport Flight Hardware

This is the second in a series of articles highlighting Glenn's role in the agency's Constellation Program.

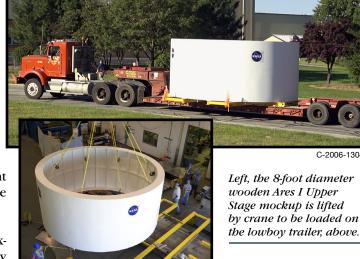
BY DOREEN ZUDELL

"Every journey begins with a single step. This is that first step for us (Glenn) on the journey back to the Moon."

-Deputy Director Rich Christiansen

Transporting huge pieces of hardware for the next generation of spacecraft may not be business as usual yet, but a recent transportation trial run confirmed the center's ability to handle this precious cargo.

Glenn's Flight and Integrated Test Manager Vince Bilardo explained that with responsibility for the production and delivery of the Ares I-1 Upper Stage Simulator, Spacecraft Adapter and Service Module for the initial demonstration flight scheduled for April 2009, Glenn would need to transport full-scale hardware segments to various buildings within the center.



Photos by Quentin Schwinn

C-2006-1284

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"Special accommodations and a lot of preplanning is required to safely transfer this type of cargo," explained Glenn's Transportation Officer Susan Kraus, Logistics and Technical Information Division (LTID).

Jeanine Hanzel, SGT/LTID, logistics manager, and Michael Jones, SGT/LTID, freight traffic specialist—with assistance from members of the Safety and Mission Assurance and the Engineering and Technical Services directorates—conducted an onsite transportation trial run of a full-scale mockup of a portion of the Ares I Upper Stage Launch Vehicle on August 12 to verify that Glenn's internal transportation route could accommodate the size and weight of the payload. In addition, Robert Azzardi, RSIS/LTID, Imaging Technology Center supervisor, and his staff visually documented the event.

The simulation involved loading the hardware on a lowboy trailer at the Fabrication Shop and then transporting it to the High Bay area of the Power Systems Facility and then on to the Hangar. Herb Lawrence, Prototype Development Branch, fabricated the 8-foot diameter wooden mockup to replicate one of the segments of the Ares I Upper Stage. One trial run carried the mockup and another carried a 30,000 pound weight to simulate weight of actual hardware.

"This simulation was a great success and demonstrated how early preparation is a necessary step to assuring successful delivery of the actual flight hardware," said Center Director Dr. Woodrow Whitlow Jr. ◆

## Glenn Names Lei New R&T Director

Center Director Dr. Woodrow Whitlow Jr. recently named Dr. Jih-Fen Lei the new director of Research and Technology.



Dr. Lei

She leads a staff of 500 civil service employees conduct-

ing advanced research in power and electric propulsion, high temperature materials and structures, communications technology, instrumentation and control, propulsion systems, microgravity science and biotechnology.

Lei succeeds Dr. Theo G. Keith Jr., who retired from the University of Toledo, in July, thus ending his Intergovernmental Personnel Assignment with NASA.

Since joining Glenn in 1998, Lei has served as chief of Glenn's Instrumentation and Controls Division, project manager of the Nanotechnology Project under NASA's Propulsion and Power Base Program, and chief of Glenn's Sensor and Electronics Technology Branch. Lei became deputy director of Glenn's Research and Technology Directorate in 2003.

"Jih-Fen will be a superb asset to our senior management team," said Whitlow. "Her technical expertise and leadership abilities will help this center stand ready to meet the nation's aeronautics and space goals."

Lei earned her bachelor's degree in physics from National Tsing-Hwa University, Taiwan, and her doctorate in material science and engineering from Northwestern University, Evanston, Illinois. She is also a graduate of the U.S. Government's Senior Executive Service Candidate Development Program. Lei has authored or co-authored over 95 publications, given over 50 talks at various national and international technical conferences and received numerous awards including three R&D 100 Awards.

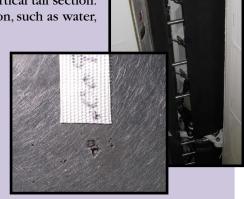
#### **Improving Shuttle Safety**

This is the third in a series of articles highlighting Glenn's research and test efforts in improving space shuttle safety.

#### **Rudder Speed Brake Conical Seal Panel Pitting**

While servicing Space Shuttle *Endeavour's* rudder speed brake, which is used to guide and slow the shuttle during landing, technicians at Kennedy Space Center observed pitting in a conical seal panel on the vertical tail section. Concerned that hot gas or contamination, such as water,

sea spray or dust, could enter the panel through the pits and interfere with the rudder speed brake's performance, the Orbiter Project Office at Johnson Space Center requested that the NASA Engineering and Safety Center conduct an independent technical assessment of the pitted conical seal panel. As part of a multicenter team, members of Glenn's Materials and Structures Division identified several potential root causes for the pitting and identified alternative techniques for repairing the pits. The affected panel was successfully repaired, due in large part to the thorough screening of available repair methods, and was



Above: Rudder speed brake panels and conical seal panels. Left: Closeup view of pitting observed in affected conical seal panel.

returned to service. As a result of this work, all conical seal panels will be inspected more closely after flight. Team: Dr. Rebecca MacKay, lead, Materials and Structures Division; Dr. Frederick Dynys, Ceramics Branch; and Dr. Randy Bowman and Dr. Timothy Gabb, Metallic Materials Branch.

# Glenn to Premier User-Friendly Online Version of AeroSpace Frontiers

In the recent survey, *AeroSpace Frontiers* readers asked for an online newsletter that is easier to access and navigate.

In October, Glenn will premier the new online version of *AeroSpace Frontiers* that will enable readers to spend more time reading and less time waiting for the issue to load. The user-friendly edition will include all the news, features and departments readers enjoy as well as an evolving array of articles that focus on the people working at Glenn.

Retirees who currently receive the newsletter in the mail and are still not comfortable accessing it via the Internet, may consider visiting their local library to gain assistance and access to the newsletter on a regular basis. Or why not make reading online a family affair by enlisting the aid of children or grandchildren to logon to <a href="http://AeroSpaceFrontiers.grc.nasa.gov">http://AeroSpaceFrontiers.grc.nasa.gov</a>. The AeroSpace Frontiers staff encourages all readers to check out the online format now, as more changes are on the way! Effective April 2007, Glenn will no longer publish or mail hard copies of the newsletter. lacksquare

# **Demolition to Begin on Historic Altitude Wind Tunnel**

BY S. JENISE VERIS

Once the centerpiece for Glenn's worldrenown engine research, the Altitude Wind Tunnel (AWT) is scheduled for demolition this fall. Abandoned since 1979, the AWT and Propulsion Systems Labs 1 and 2 are among many aging facilities which are being eliminated as part of a special agency program for unused or obsolete structures.

#### The AWT: A Look Back

The National Advisory Committee on Aeronautics (NACA) began operating the AWT in 1944 with the goal of improving existing piston engines of military aircraft during World War II. In particular, the B-29 bomber powered by the Wright R-3350 engine was plagued by several problems including overheating and fuelefficiency issues. Ironically, a turbojet engine, not a piston engine, was the first test run in the AWT. The Bell YP-59A, which used the first turbojet engine in the United States, the GE I-16, was tested in February prior to the tunnel's official opening in May when the R-3350 tests began. The AWT was the nation's first known full-scale engine test facility capable of simulating altitude conditions.

A series of modifications implemented after WWII prevented the AWT from becoming obsolete and transformed the facility to accommodate jet propulsion testing. In 1946, two small supersonic tunnels, which shared the AWT's exhaust system, were built for ramjet testing. The facility was also used for Mercury Program-related training in the late 1950s. Then, in 1962, a vacuum pump system was installed and large bulkheads were inserted into the tunnel to create a space power chamber for testing of a mock Centaur rocket.

#### Preserving a National Landmark

With its rich history, the AWT has potential to become a national landmark. AWT Demolition Project Manager Robert Houk, Project Management Branch, is consulting with Glenn's Historic Preservation Officer Les Main, Facilities Division, on National Advisory Council Historical Preservation guidelines and regulations. The project scope calls for demolish-

Inactive since 1979, the AWT, with its winding tunnel loops, is one of NASA's aging facilities slated to be demolished.



ing the AWT shell and supporting foundations outside of the Microwave Systems Laboratory building, which also houses Educational Programs Office personnel. The test section, however, is being preserved for consideration as a tour site to display historical artifacts.

"We expect to finalize our preservation efforts soon," Houk said. "This would enable us to award the contract by the end of FY06 and take advantage of the current higher price of scrap metal to offset costs. The first phase of activities involves removing and rerouting active utilities. We then will isolate the area between the Visitor Center and the Refrigeration Building to remove any lead paint or traces of asbestos material before the demolition work begins."

#### **Demolition Timeline**

Starting in October, the AWT demolition project will affect traffic flow on Ames Road. Houk noted that parking for the nearby area will be prohibited during the demolition period. The most hazardous activities will be scheduled after hours and on weekends, whenever necessary. Stay tuned to *Today@Glenn* for project updates, as the demolition is expected to continue throughout the winter and early spring.

To learn more about this project and updates on all center construction projects, visit the Facilities Division Web site at <a href="http://fd.grc.nasa.gov/activeprojects.cfm">http://fd.grc.nasa.gov/activeprojects.cfm</a>.

## Glenn Expertise Plays Role in STS-115

With the launch of the *Atlantis* STS-115 mission, NASA resumes construction on the International Space Station by installing a girder-like structure, known as the P3/P4 truss segment, that will double the station's power capability. Much of the technology necessary for the P3/P4 is comprised mainly of solar cell arrays, batteries and power conditioning equipment developed with expertise provided by Glenn.

In partnership with Johnson Space Center, Glenn's Electric Power System Management Team continues its responsibility for end-to-end technical oversight of station's power capability.

"The P3/P4 provides station the capability to collect, store, generate, distribute and

regulate power," said Thomas Kerslake, Power and Communication Systems Analysis Office.

Glenn was also directly involved in the following crucial portions of the STS-115 mission: flight certification analysis of station's power system to determine readiness to support STS-115; development of special procedures for boost charging and rebalancing batteries; and sequential shunt units, battery charge-discharge units, circuit isolation devices and radiators, all essential parts of P3/P4.

Currently on station, and essential to its power system, the plasma contactor cathode, or grounding rod for the system, was also developed under Glenn management. •

#### Straight from the Director

# **Retraining Will Help Get the Job Done**

While our center was being considered for and then assigned new work associated with the Constellation Program, I knew that it would require additional training of our employees to get the job done right. Recently, we began retraining efforts in key areas that will help us realign our workforce to meet the agency's new mission requirements.

We have identified three areas—systems engineering, safety and mission assurance and project management—that are vital to our future success but are competencies that we need to strengthen. Working with the Director's Leadership Team and the Organization Development and Training Office, we put into place a retraining process that will provide opportunities for employees to move into or strengthen their skills in these specific categories.

The Space Missions Excellence Program is an accelerated and intensive development



Photo by Marvin Smith

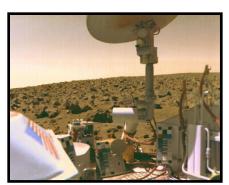
Center Director Dr. Whitlow, right, discuss retraining efforts with, left to right, Deputy Director Rich Christiansen, Engineering and Technical Services Director Olga Gonzalez-Sanabria, Center Operations Director Kenny Aguilar, Organization Development and Training Office Chief Cynthia Forman and Systems Engineering Development Manager Marton Forkosh.

program designed to raise occupational proficiency levels through a variety of developmental activities. The program begins by assessing each participant's knowledge and experience and determining how much training will be needed to become fully qualified in the competency. The goal of this retraining effort is to qualify up to 50 people in systems engineering, 20 in safety and mission assurance and 40 in project management within two years.

My objective is to ensure that all employees are fully engaged in contributing to the agency's mission. This new training program will enable our employees to enhance their careers and add value to NASA's future. I encourage employees to contact our Organization Development and Training Office with specific questions on either this or other training programs. •

## **Monthly Web Feature Looks Back and Beyond**

Visit "This Month in Exploration" every month to find out how aviation and space exploration have changed throughout the years, improving life for humans on Earth and in space. While reflecting on the events that led to NASA's formation and its rich history of accomplishments, "This Month in Explo-



The September 3, 1976, NASA Viking 2 landing on the surface of Mars is showcased in this month's Web feature.

ration" also reveals where the agency is leading this nation—to the moon, Mars and beyond. The monthly feature was created by Glenn's **Exploration Systems** Division. Logon to http://www.nasa.gov/ mission pages/exploration/main/this month main.html to view this new feature.



## Lighting the Way

2006 Glenn Combined Federal Campaign

Co-chair: Linda McMillen

Kickoff—Tuesday, September 26 at 9:30 a.m. in the Main Cafeteria, Sharp Employee Center

> Agency Fair—Tuesday, September 26 and Wednesday, September 27 Booths on display throughout first floor of the Sharp Employee Center

Pacesetter Campaign— September 26 through October 10

Retirees and contractors may also contribute to the CFC by contacting Blanche Preusser at 216-433-2528.

#### News and Events

## **Printing Conference**



Photo by Marvin Smith

C-2006-1192

This year, Glenn hosted the annual NASA Printing Conference from July 11 to 13. Keynote speaker Bruce James, public printer of the United States and CEO of the Government Printing Office (GPO) explained how a new electronic passport would deter identity theft and terrorism and how the GPO is developing e-Government initiatives to ensure that Americans have easier access to government documents. Terry Jackson, chief information officer, NASA Shared Services Center (NSSC), provided an overview of the NSSC, which was recently appointed oversight of the agency's Print Program. Pictured above, left to right: Dennis Dubyk, Glenn's printing officer; Fred Moore, NASA's printing officer (retired); Bruce James; Harvey Schabes, deputy director of Center Operations and Mary Lester, chief, Logistics and Technical Information Division, interact during the conference. During an informal reception on August 3, employees, retirees, friends and family gathered to bid farewell to Associate Director Robert Fails, who retired from NASA after 33 years of federal service (including time with the Defense Contract Audit Agency). Guests lauded Fails for not only his value as a member of the leadership team but also for his institutional expertise and excellent judgment

## **Fails Farewell**



noto by Michele Murphy

C-2006-1365

throughout his career. Center Director Woodrow Whitlow, Jr., pictured left, presents Fails with framed art from Headquarters' staff in the Aeronautics Research Mission Directorate, one of many gifts presented to Fails that afternoon. Deputy Director Rich Christiansen looks on.

### **Children at Work**



Photo by Marvin Smith

C-2006-137

The temperature and spirits were high during Glenn's annual Take Our Children to Work Day,held August 3. Sandra Nagy, CIO Business Office, and Cynthia Watson, Office of Equal Opportunity Programs, (OEOP) collaborated with the Visitor Center (VC) staff to schedule presentations and videos at the VC for more than 600 employees and their children. Topics focused on Glenn research, the history of flight, career

opportunities, developing a positive attitude and a variety of historical and future NASA missions. Featured speaker Gary Broadbent, better known as "Boomerang Man," (pictured) demonstrated the physics of flight using a variety of boomerangs. This was the 13th year the OEOP championed this event.



Photo by Marvin Smith

C-2006-1273

# **Managing Transitions**

Glenn's Organization Development and Training Office is helping employees who are wrestling with diverse changes in the work place by offering two new workshops: "Managing Individual Transitions" and "Communicating and Managing Change." The workshops, which premiered at the center in August, provided information on essential skills that assist both employees and managers in coping effectively with transitions. Additional workshops are being planned for the fall to continue providing employees with the leverage to effectively get through times of intense change. Pictured, left to right, Harley Ostis, regional vice president, Linkage Incorporated, with Dale Force, Electron and Optical Device Branch, and Cheryl Dickersen, QSS director of Human Resources, during a training session.

## People

#### **Promotions**





Long-Davis

Dr. Misra

Mary Jo Long-Davis was selected chief, Inlet and Nozzle Branch, Propulsion Systems Division. Long-Davis, who has served NASA for 17 years, brings to the position a strong technical background in analytical and experimental research on aerodynamic problems with exhaust nozzles for High Speed Research, and project management leadership experience in key aeropropulsion programs.

**Dr.** Ajay K. Misra was selected deputy division chief, Materials and Structures Division. Formerly chief of the Ceramics Branch, Misra brings to his new position industry experience, management of major NASA technology development programs and significant contributions as a researcher in the areas of high-temperature materials, space power systems, energy storage, fuel cells and chemical thermodynamics.



Wessel

Carol Wessel has been selected chief, Office of Human Resources and Workforce Planning within the Center Operations Directorate. Wessel joins NASA from the Defense Finance and Accounting Service Human Resources Business Unit in downtown Cleveland. She brings to the position a strong background in human resources that spans 35 years of service in the federal sector.

#### Space Flight Awareness Honorees





Chmiel

Dr. Krantz

Four Glenn employees were among the Space Flight Awareness (SFA) honorees from NASA research centers, Headquarters and international partners who were recognized for their contributions to STS-121 at an awards brunch in June 29.

Associate Administrator for Space Operations Bill Gerstenmaier presented the keynote address for this special event. Glenn SFA honorees include the following:

Alan Chmiel, ZINT/Human Health and Performance Systems Projects Office, for leadership and technical skills as lead of the triaxial sensor head-Ethernet/standalone development team supporting the Space Acceleration Measurement System on the International Space Station.

Dr. Timothy Krantz, Mechanical Components Branch, for an essential role



Lorib

Dr. MacKan

in troubleshooting and resolving the rudder/speed brake actuator gear damage issue in support of the Space Shuttle Program Office and the National Engineering and Safety Center.

Tibor Lorik, ZINT/Mission Operations and Integration Projects Office, for outstanding leadership to ensure the safety, maintenance, repair and refurbishment of the Physics of Colloids in Space, an International Space Station payload, during shuttle down time.

Dr. Rebecca MacKay, Materials and Structures Division, for outstanding leadership as lead of a National Engineering and Safety Center-formed team of investigators that developed the best technical approach for determining the root cause of the thruster cracking problem on the space shuttle orbiter.

#### **Awards**



Dr.Whitlow

Center Director Dr. Woodrow Whitlow Jr., is the recipient of the 2006 National Black Coalition of Federal Aviation Employee (NBCFAE) Ron E.McNairAward.

This award was established to honor pioneers and scholars in aeronautics, who have significantly contributed through recruitment, education and training in the field of aeronautics. The award was presented at the NBCFAE 30<sup>th</sup> annual National Training Conference awards banquet on August 4.

TheAmericanInstitute for Aeronautics and Astronautics (AIAA) recently presented Richard Shaltens, chief of the Thermal Energy Conversion Branch, the AIAA Aerospace



Shaltens

Power Systems Award in honor of nearly 30 years of pioneering contributions to the development, management and advocacy of dynamic power conversion technologies and related power systems for NASA missions and other space applications.

AeroSpace Frontiers is an official publication of Glenn Research Center, National Aeronautics and Space Administration. It is published the first Friday of each month by the Community and Media Relations Office in the interest of the Glenn workforce, retirees, government officials, business leaders and the general public.

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DEADLINES: News items and brief announcements for publication in the October issue must be received by noon, September 15. The deadline for the November issue is noon, October 13. Submit contributions to the editor via e-mail, doreen.zudell@grc.nasa.gov, fax 216-433-8143, phone 216-433-5317 or 216-433-2888, or MS 3-11. Ideas for news stories are welcome but will be published as space allows. View us online at http://AeroSpaceFrontiers.grc.nasa.gov.





#### **News Notes**

LESA MEETING: LESA/IFPTE, Local 28, will hold its next monthly membership meeting on Wednesday, September 13 at noon in the Employee Center.

THIRD SATURDAY AT THE VC: On Saturday, September 15, Glenn's Visitor Center (VC) will present "To Fly!" from 10 a.m. to 3 p.m. Hear firsthand from local pilots about the thrill of flight and the impact of aerospace research on our lives. Presentations include "Flight Research," 11 a.m. with Kurt Blankenship, NASA flight research pilot; and "To Fly," 1 p.m. with Pat Arter, Continental Airlines captain. For reservations, call 216-433-9653. For details on this and other Glenn events, log on to glennevents.grc.nasa.gov.

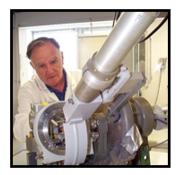
INDUSTRY DAY—SMALL BUSINESS FORUM: Glenn will host an Industry Day-Small Business Forum on September 21 at OAI. The event is specifically intended to brief industry—prime contractors and vendor contractors including small businesses—on NASA's new Constellation Program and some of the procurement opportunities potentially available for Glenn-managed work or work managed by other NASA centers.

PBS REUNION SET: A Plum Brook Station (PBS) Fourth Reunion will be held on Saturday, September 23, at the Engineering Building Cafeteria. A luncheon, program and facility tours are being planned. Contact Bill Brown at 3911 James Ave., Huron, Ohio 44839, or e-mail huronbill@buckeye-express.com.

HISPANIC HERITAGE MONTH EVENT: NASA Astronaut Jose M. Hernandez will be the keynote speaker for the Hispanic Heritage Month Observance, September 25, from 1 to 3 p.m. in the DEB Auditorium. "Hispanic Americans: Our Rich Culture Contributing to America's Future" is the theme of this year's event that will include cultural performances and refreshments.

AFGE MEETING: AFGE Local 2182 will hold its next monthly membership meeting on October 4, at 5 p.m. at Denny's Restaurant, 25912 Lorain Road, North Olmsted. All members are encouraged to attend.

## In Memory



Ralph Garlick, 70, who served NASA nearly 47 years as a metallurgical engineer, has died. Garlick began his career at Glenn (Lewis) after graduating from Case Western University in 1959. For the past 30 years, he worked in the Xray Diffraction Laboratory for the Materials Division, running an average of 1000 samples each year.

"Ralph was a tireless worker who was never satisfied with a job until he had exhausted all means to achieve

the most accurate findings," said Dr. Carl Lowell, retired deputy director of the Materials Division. "His contributions to the center's mission are documented in the areas of oxidation, superalloys, thermal barrier coatings, space power and electronic components, and acknowledged in many more."

Garlick was a co-recipient of the first Materials Division Order of the Enterprise Award (1985) and the division's Exceptional Service Award (1991). However, the division will remember Garlick most for his love of music, classic radio programming and his charitable nature. The Glenn community will miss this caring and reputable coworker.

Nancy Kennedy, 51, an SGT, Inc., staff lead and office assistant supporting the Optical Instrumentation and NDE Branch in the Communications Division, has died.

"Nancy was a very detail-oriented and productive employee who performed at the highest level for more than 13 years, " said SGT Administrative and Clerical Services Manager Susan Silver. "Kennedy earned several Special Achievement Awards during her career for the exceptional



administrative and clerical support she provided to the NASA Glenn staff."

Division and branch members, alike, recall Kennedy as a conscientious and extremely thoughtful person who enjoyed baking on many occasions, especially birthdays. Kennedy will be greatly missed by her NASA customers and SGT staff.

Allan R. Bishop, 64, who retired from NASA in January 2005 after 35 years of service, has died. Bishop joined the center as a member of the Army Corps of Engineers, and later converted to NASA. He retired from the Systems Analysis Division, Programs and Projects Directorate, where he was fondly referred to as "Renaissance man" and served in a dual capacity as computer specialist and research engineer.

Ward M. Kreidler, 83, who retired from NASA in December 1988 after 28 years of federal service, has died. Kreidler served as a model assembly and parts inspector. His service also includes three years in the U.S.Army.

Benjamin R. Sharkey, 80, who retired from NASA in November 1980 after 30 years of federal service, has died. Sharkey served as a research laboratory mechanic foreman. His service also includes two years in the U.S.Army.

## In Appreciation

I am very grateful to the NASA family for the outpouring of calls, cards, donations and other expressions of sympathy on the death of my husband, Allan Bishop; especially memories shared by those who came to the funeral and afterwards to our home. I am left with no doubt of Allan's positive impact at NASA.

## Glenn Receives Six One NASA Peer Awards

Center Director Dr. Woodrow Whitlow Jr. acknowledged six individuals for their demonstration of the One NASA philosophy during the Director's Leadership Team meeting on June 27. The employees—civil servants and support service contractors—recently received prestigious One NASA Peer Awards.

The award program recognizes members of the NASA family who demonstrate the One NASA philosophy. Selections must involve participation from multiple NASA centers and are based on one or more of

the following themes: decisionmaking for the common good, collaborating to leverage existing capabilities and exercising standards that demonstrate efficiency.

The following employees received Peer Awards during the 2006 cycle (March 2005 through March 2006):

Casey Blaze, Engineering Development Division, for continued support to optimize NASA fabrication capability through innovation, teamwork

> and cost-effective methods, which focus on customer satisfaction.

Myrtle Collins, Office of the Director, for creating a process for identifying and preserving the records of the Office of the Director that will be used by researchers and historians documenting the Glenn Research Center for generations to come. Barbara Kakiris, ANLX/Aeronautics Division, for outstanding contributions to the planning of our Aeronautics programs and recognition of exceptional employees.

David Steigman, Logistics and Technical Information Division, for his efforts in coordinating the services and staff of Publishing Services and Imaging Technology Center, which has been instrumental in supporting the development and delivery of proposals for both space and aeronautics programs.

Dennis Vano, Business Systems Office, for his leadership, vision and dedication in providing business and contract support services to NASA's missions in space and aeronautics.

Mark Wernet, Instrumentation and Controls Division, for his contributions to the Offset Stream Technology test program, which have significantly strengthened the jet noise programs at NASA Langley and Glenn.

Editor's Note: Details on Glenn's NASA Ballistic Impact Team, winners of the One NASA Center Best Award, will be announced in a future issue.



Photo by Quentin Schwinn

C-2006-1116

Dr. Whitlow, center, pictured, with, left to right, One NASA Peer Award winners Blaze, Wernet, Steigman, Collins and Vano. Not pictured: Kakiris

National Aeronautics and Space Administration John H. Glenn Research Center at Lewis Field 21000 Brookpark Road Cleveland, Ohio 44135